



(12)EUROPEAN PATENT APPLICATION

(88) Date of publication A3:

03.04.2002 Bulletin 2002/14

(51) Int Cl.7:

G01S 5/14, G01S 5/02,
G01S 3/46

(43) Date of publication A2:

26.07.2000 Bulletin 2000/30

(21) Application number:

00300249.0

(22) Date of filing:

14.01.2000

(84) Designated Contracting States: CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE Designated Extension States: AL LT LV MK RO SI (30) Priority: 19.01.1999 US 232610 (71) Applicant: Ford Global Technologies, Inc. Dearborn, Michigan 48126 (US)	(72) Inventors: • Hrovat, Davorin David Ann Arbor, Michigan 48103 (US) • Fodor, Michael Glenn Dearborn, Michigan 48124 (US) • Yester, John Loring Bloomfield Hills, Michigan 48301 (US) (74) Representative: Messulam, Alec Moses et al A. Messulam & Co. Ltd., 43-45 High Road Bushey Heath, Herts WD23 1EE (GB)
--	--

(54)On-board GPS sensor systems

(57)

GPS sensors (14, 16; 30, 32, 34, 36) arranged in certain geometries in an automotive vehicle (10) to provide information that is processed by an on-board processor (18; 40) to derive parameters useful for warning, control, and/or documentation

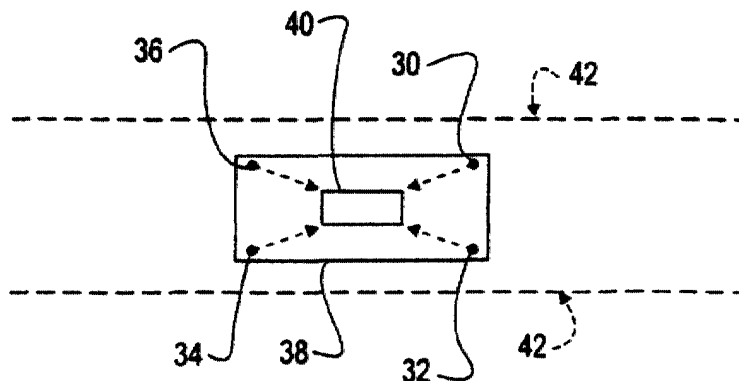


FIG. 5



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 30 0249

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 430 654 A (KYRTSOS CHRISTOS T ET AL) 4 July 1995 (1995-07-04) * column 11, line 54-60; figures 1,2,7,8 * * column 12, line 17-22 * * column 2, line 41,42 * * column 5, line 4 - column 6, line 16 * * column 8, line 50 - column 9, line 37 *	1-3,6-8, 11-16	G01S5/14 G01S5/02 G01S3/46
Y	---	4,5,9,10	
X	US 5 101 356 A (TIMOTHY LA MAR K ET AL) 31 March 1992 (1992-03-31) * column 1, line 14-32,48,49,64,65; figure 2 * * column 3, line 4-11 * * column 4, line 1-3,20-28 *	1-12	
Y	---	4,5,9,10	
X	EP 0 437 372 A (ROCKWELL INTERNATIONAL CORP) 17 July 1991 (1991-07-17) * abstract; figures 1-3,8,9 * * page 4, line 56 - page 5, line 26 *	1-3,8, 11,12	
A	EP 0 703 463 A (AT & T CORP) 27 March 1996 (1996-03-27) * the whole document *	15	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A	US 5 495 257 A (LOOMIS PETER V W) 27 February 1996 (1996-02-27) * the whole document *	16	G01S G06F
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 12 February 2002	Examiner Schmelz, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 0249

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-02-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5430654	A	04-07-1995	DE	4340954 A1	09-06-1994
			GB	2273218 A ,B	08-06-1994
			JP	6213992 A	05-08-1994
US 5101356	A	31-03-1992	NONE		
EP 0437372	A	17-07-1991	US	5021792 A	04-06-1991
			DE	69112085 D1	21-09-1995
			DE	69112085 T2	18-04-1996
			EP	0437372 A2	17-07-1991
EP 0703463	A	27-03-1996	US	5559520 A	24-09-1996
			EP	0703463 A2	27-03-1996
			JP	8105951 A	23-04-1996
US 5495257	A	27-02-1996	US	5680140 A	21-10-1997